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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/592,156	06/12/2000	Leif Friman	781.358USW1	7434

32294 7590 01/11/2006

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EXAMINER

LY, NGHI H

ART UNIT	PAPER NUMBER
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2686

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/592,156	Applicant(s) FRIMAN ET AL.	
	Examiner Nghị H. Ly	Art Unit 2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lu et al (US 5,887,256) in view of Sanjuan (EP 0858235A1).

Regarding claim 1, Lu teaches a method of allocating a channel in a mobile system (see Abstract, fig.2 and column 13, lines 9-40, see "resource allocation"), comprising: allocating in call set-up at least one of said telecommunication channels to the base station handling the call (see fig.2, channels 174, column 15, lines 27-32, Lu's

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"free channel" reads on Applicant's "unallocated communication channel". In addition, see Applicant's specification page 3, lines 1-11 for "unallocated telecommunication channel" and column 15, lines 4-15, see "setup"), and controlling the base station controller to transmit information to the base station on the telecommunication channel allocated thereto (column 16, lines 15-17, see "the BSC sends a Channel Release message to the BTS to release the channel" and column 15, lines 29-32, see "a channel activate message is sent from the BSC to the BTS which essentially asks the BTS to activate the selected channel". In this case, the "selected channel" is "the free channels" and it reads on Applicant's "unallocated communication channel", see column 15, lines 27-28).

Lu does not specifically disclose arranging in the system unallocated telecommunication channels between a base station controller and a base station.

Sanjuan teaches arranging in the system unallocated telecommunication channels between a base station controller and a base station (see front page (57) and column 2, lines 10-38, see "channel available").

Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention was made to provide the above teaching of Sanjuan into the system of Lu in order to optimize employment of the resource (see Sanjuan, column 1, lines 13-15).

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4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lu et al (US 5,887,256) in view of Sanjuan (EP 0858235A1) and further in view of Tiedemann et al (US 5,987,326) and Choi et al (US 6,724,740).

Regarding claim 2, the combination of Lu and Sanjuan teaches the telecommunication channels are circuit-switched (see Lu, column 2, lines 33-53 and column 3, lines 9-15).

The combination of Lu and Sanjuan does not specifically disclose the telecommunication channels are classified on the basis of their characteristics into at least two categories, i.e. primary telecommunication channels and secondary telecommunication channels, and a primary telecommunication channel, if available, is allocated to the base station, otherwise a free secondary telecommunication channel is allocated thereto.

Tiedemann teaches the telecommunication channels are classified on the basis of their characteristics into at least two categories, i.e. primary telecommunication channels and secondary telecommunication channels, and a primary telecommunication channel, if available, is allocated to the base station, otherwise a free secondary telecommunication channel is allocated thereto (see column 8, lines 46-54 and see column 8, line 54 to column 9, line 4).

Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention was made to provide the above teaching of Tiedemann into the system of Lu and Sanjuan in order to reduce congestion.

The combination of Lu, Sanjuan and Tiedemann does not specifically disclose the telecommunication channels are classified on the basis of their characteristics into at least two categories, i.e. primary telecommunication channels and secondary telecommunication channels, and in call set-up.

Choi teaches the telecommunication channels are classified on the basis of their characteristics into at least two categories, i.e. primary telecommunication channels and secondary telecommunication channels, and in call set-up (see Abstract, column 29, lines 4-24, see "call setup", "fundamental channel" and "supplemental channel").

Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention was made to provide the above teaching of into the system of Lu, Sanjuan and Tiedemann in order to provide a voice and data transmission/reception device in a communication system and a control information message by using channel that are not occupied.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lu et al (US 5,887,256) in view of Sanjuan (EP 0858235A1) and further in view of Tiedemann et al (US 5,987,326), Choi et al (US 6,724,740) and Farias et al (US 4,891,806).

Regarding claim 3, the combination of Lu, Sanjuan, Tiedemann and Choi teaches a method as claimed in claim 2. The combination of Lu, Sanjuan, Tiedemann and Choi does not specifically disclose the free telecommunication channels are classified into categories on the basis of their data transmission capacity or quality such

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that the primary telecommunication channels have larger data transmission capacity or they are of better quality than the secondary telecommunication channels.

Farias teaches the free telecommunication channels are classified into categories on the basis of their data transmission capacity or quality such that the primary telecommunication channels have larger data transmission capacity or they are of better quality than the secondary telecommunication channels (see column 16, lines 36-42).

Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention was made to provide the above teaching of Farias into the system of Lu, Sanjuan, Tiedemann and Choi in order to maintain signal quality.

6. Claims 4, 7, 8, 9, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lu et al (US 5,887,256) in view of Kanai (US 6,195,566).

Regarding claim 4, Lu teaches a mobile system (see fig.2), which comprises a base station controller (see fig.2, BSC 172) and at least a first and a second base station (fig.2, BTS 164, see three "." Under box BTS and it reads on Applicant's "first and a second base station"), which comprise transceiver units (see fig.2, TRX 160 and column 7, lines 32-33) for establishing a telecommunication connection by radio signals to the subscriber terminals located in the base station coverage area (see fig 2, wireless connection between BTS and handsets 150) and the base station controller (see fig.2, BSC 172) comprises control means (see fig.2, Processor 184 of BSC 172) which in call set-up (column 15, lines 4-15, see "setup" and see column 15, lines 27-32) allocate at

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least one of the telecommunication channels to the first or the second base station for the duration of the call (column 8, lines 19-50, see "BSC unit 172 further includes a processor 184 for handling the aforementioned radio resource control RR, and column 16, lines 15-17, see "the BSC sends a Channel Release message to the BTS to release the channel" and column 15, lines 29-32, see "a channel activate message is sent from the BSC to the BTS which essentially asks the BTS to activate the selected channel"), wherein the base station controller comprises control means which in call set-up allocate at least one of the telecommunication channels to the first or the second base station for the duration of the call (see column 15, lines 5-16, see "setup", the teaching of Lu inherently teaches applicant's "the base station controller comprises control means").

Lu does not specifically disclose switching means for switching the base station transceiver units onto a particular channel of a plurality of optional telecommunication channels between the base station controller and the base stations, and which transmit a predetermined message indicating the allocated telecommunication channel to the base station to whom the channel is allocated and the switching means of the first, and correspondingly, of the second base station are responsive to the message for switching the base station transceiver units to the telecommunication channel assigned by the message.

Kanai teaches switching means for switching the base station transceiver units onto a particular channel of a plurality of optional telecommunication channels between the base station controller and the base stations (see fig.1, BSC 102, Controller 130 and

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Switching devices 105), the base station controller (see fig.1, BSC 102) comprises control (see fig.1, Controller 130, since the Controller 130 receives signal from the BSC 102, those skilled in the art thus would appreciate that Kanai could be modified such that the station controller (see fig.1, BSC 102) comprises control (see fig.1, Controller 130)) without deviating from the scope and spirit of Kanai's invention, and column 4, lines 24-27, see "the signal in multiplexer 106-2 will, depending on the setting of switching device 105" and which transmit a predetermined message (column 5, lines 26-40, see "the controller 130 uses the information from the traffic monitor 250, and controls the switching") indicating the allocated telecommunication channel to the base station to whom the channel is allocated (column 3, lines 48-55, see "Based on information which flows from the customer data registers 211, 221, 231 and column 5, lines 26-40, see "Depending upon the traffic situation inside each cell and information on the type of service contact"), and the switching means of the first, and correspondingly, of the second base station (Abstract, and column 1, line 64 to column 2, line 8, see "first base station" and "second base station") are responsive to the message for switching the base station transceiver units to the telecommunication channel assigned by the message (column 5, lines 26-40, see "the controller 130 uses the information from the traffic monitor 250, and controls the switching". Since Kanai teaches "first base station" and "second base station" (see Abstract, and column 1, line 64 to column 2, line 8), the teaching of Kanai inherently teaches that if the transceiver 104 (of first base station and/or second base station) is selected (or not selected), the

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base station of that transceiver 104 would also be selected (or not selected)

respectively, and it reads on Applicant's claimed limitation).

Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention was made to provide the above teaching of Kanai into the system of Lu so that traffic can be assigned to the transceiver, based on the provider with the highest volume or according to a prearranged priority scale (see Kanai, Abstract).

Regarding claim 7, Lu further teaches the message indicating the allocated telecommunication channel also indicates a radio channel to be used in the call to the transceiver unit of the base station (column 16, lines 15-17, see "the BSC sends a Channel Release message to the BTS to release the channel" and column 15, lines 29-32, see "a channel activate message is sent from the BSC to the BTS which essentially asks the BTS to activate the selected channel").

Regarding claim 8, Lu further teaches the mobile system is the GSM system and said message consists of a CHANNEL ACTIVATION message (column 16, lines 15-17, see "the BSC sends a Channel Release message to the BTS to release the channel" and column 15, lines 29-32, see "a channel activate message is sent from the BSC to the BTS which essentially asks the BTS to activate the selected channel") in accordance with the GSM specifications part 08.58 (see column 7, lines 18- 30, see "BSM 08.58"), to which is added information on the telecommunication channel allocated to the base station (also see column 16, lines 15-17, and column 15, lines 29-32).

Regarding claim 9, claim 9 is rejected with the similar reason as set forth in claim 4 above.

Regarding claim 10, Lu further teaches the particular transceiver unit comprises means for message for the duration of the call to be applying a radio channel assigned by the established (column 16, lines 15-17, see "the BSC sends a Channel Release message to the BTS to release the channel" and column 15, lines 29-32, see "a channel activate message is sent from the BSC to the BTS which essentially asks the BTS to activate the selected channel").

Regarding claim 11, claim 11 is rejected with the similar reason as set forth in claim 4 above.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lu et al (US 5,887,256) in view of Kanai (US 6,195,566) and further in view of Tiedemann et al (US 5,987,326) and Choi et al (US 6,724,740).

Regarding claim 5, the combination of Lu and Kanai teaches a method as claimed in claim 4 characterized in that the telecommunication channels are circuit-switched (see Lu, column 2, lines 33-53 and column 3, lines 9-15).

The combination of Lu and Kanai does not specifically disclose the telecommunication channels are classified on the basis of their characteristics into at least two categories, i.e. primary telecommunication channels and secondary telecommunication channels, and a primary telecommunication channel, if available, is

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allocated to the base station, otherwise a free secondary telecommunication channel is allocated thereto.

Tiedemann teaches the telecommunication channels are classified on the basis of their characteristics into at least two categories, i.e. primary telecommunication channels and secondary telecommunication channels, and a primary telecommunication channel, if available, is allocated to the base station, otherwise a free secondary telecommunication channel is allocated thereto (see column 8, lines 46-54 and see column 8, line 54 to column 9, line 4).

Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention was made to provide the above teaching of Tiedemann into the system of Lu and Kanai in order to reduce congestion.

The combination of Lu, Kanai and Tiedemann does not specifically disclose the telecommunication channels are classified on the basis of their characteristics into at least two categories, i.e. primary telecommunication channels and secondary telecommunication channels, and in call set-up.

Choi teaches the telecommunication channels are classified on the basis of their characteristics into at least two categories, i.e. primary telecommunication channels and secondary telecommunication channels, and in call set-up (see Abstract, column 29, lines 4-24, see "call setup", "fundamental channel" and "supplemental channel").

Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention was made to provide the above teaching of Choi into the system of Lu, Kanai and Tiedemann in order to provide a voice and data transmission/reception

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device in a communication system and a control information message by using channel that are not occupied.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lu et al (US 5,887,256) in view of Kanai (US 6,195,566) in view of Farias et al (US 4,891,806).

Regarding claim 6, the combination of Lu and Kanai teaches a mobile system as claimed in claim 4. The combination of Lu and Kanai does not specifically disclose the primary telecommunication channels have larger data transmission capacity or they are of better quality than the secondary telecommunication channels.

Farias teaches the primary telecommunication channels have larger data transmission capacity or they are of better quality than the secondary telecommunication channels (see column 16, lines 36-42).

Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention was made to provide the above teaching of Farias into the system of Lu and Kanai in order to maintain signal quality.

Response to Arguments

9. Applicant's arguments with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection.

On pages 12, 18 and 19 of applicant's remarks, applicant argues that Lu, Tiedemann and Choi fail to disclose or suggest all of the elements of claims 2 and 5.

In response, Lu, Sanjuan (newly cited), (or Kanai), Tiedemann and Choi, does indeed teach claims 2 and 5. In addition, applicant's attention is directed to the rejection of claims 2 and 5 above.

On pages 13 and 19 of applicant's remarks, applicant argues that Lu, Tiedemann and Farias fail to disclose or suggest all of the elements of claims 3 and 6.

In response, Lu, Sanjuan (newly cited), (or Kanai), Tiedemann and Farias, does indeed teach claim 3. In addition, applicant's attention is directed to the rejection of claims 3 and 6 above.

On pages 15, 18 and 19 of applicant's remarks, applicant argues that Lu and Kanai fail to disclose or suggest all of the elements of the claims, and Lu and Kanai, whether considered alone or in combination, fail to disclose or suggest control means which, in call set-up, allocate at least one of the telecommunication channels to the base station for the call, as recited in claims 4 and 11. The Office Action argues that the processor 184 of the BSC 172 in Fig. 2 of Lu discloses such a control means.

In response, the combination of Lu and Kanai does indeed all of the elements of the claims 4, 7-11. In addition, applicant's attention is directed to the rejection of claims 4, 7-11 above.

On page 16 of applicant's remarks, applicant further argues that Kanai fails to disclose during call set-up, allocate at least one of the telecommunication channels to the base station for the call.

In response, Lu (not Kanai) teaches during call set-up, allocate at least one of the telecommunication channels to the base station for the call (see column 15, lines 5-16,

see “setup”, the teaching of Lu inherently teaches applicant’s “the base station controller comprises control means”), and the combination of Lu and Kanai indeed teaches applicant’s claimed invention.

On page 17 of applicant’s remarks, applicant further argues that Kanai fails to disclose or suggest that the switching means is responsive to a message received by the base station in conjunction with the call set-up for switching a particular transceiver unit onto the telecommunication channel indicated by the message for the call, as recited in claim 9.

In response to applicant’s arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In this case, Lu teaches the switching means is responsive to a message received by the base station in conjunction with the call set-up (see column 15, lines 5-16, see “call set-up” and “the VLR tells the MSC to complete the call and proceed with call set-up”, also see Abstract, see “switching center” and “call”, and column 3, lines 22-32, see “switch”, “call path”, and column 10, lines 27-36, see “switches”, “call”) for switching a particular transceiver unit onto the telecommunication channel indicated by the message for the call, and the combination of Lu and Kanai does indeed teach applicant’s claim 9.

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Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi H. Ly whose telephone number is (571) 272-7911. The examiner can normally be reached on 8:30 am-5:30 pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nghi H. Ly

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12/31/05

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